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(54) Title: NEW POLYETHER BASED MONOMERS AND HIGHLY CROSS-LINKED AMPHIPHILE RESINS

(57) Abstract: The present invention relates to a cross-linked polyether which is obtained by polymerization of at least one monomer selected from the group consisting of (a) ( $\alpha$ -X-methyl) vinyl-EWG, ( $\alpha$ -X-methyl) vinyl-ERG, or ( $\alpha$ -X-methyl) vinyl-aryl, where X is oxygen, sulfur, PEG, PPG or poly (THF); (b) a monomer which is polymerizable with a PEG, PPG or poly (THF) cross-linker having at least one ( $\alpha$ -X-methyl) vinyl-EWG, ( $\alpha$ -X-methyl) vinyl-ERG or ( $\alpha$ -X-methyl) vinyl-aryl, where X is oxygen, sulfur, PEG, PPG, or poly (THF); (c) a PEG, PPG, or poly (THF) cross-linker having at least an acrylamide or a methacrylamide end group; and (d) mixtures thereof. Various monomers, resins and methods for preparing such cross-linked polyethers are also disclosed.

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